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August 17, 1998

Memorandum of Ex Parte Communication

Megalie Salas
Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Dear Ms. Salas:

Re: *CC Docket No. 96-45 - Universal Service*

On Friday, August 14, 1998, Mr. Marvin Bailey of Ameritech, Mr. Keith Epstein of SBC, Mr. Jim Lambertson of Bell Atlantic, Ms. B. B. Nugent of US West, and the undersigned met with Ms. Irene Flannery, Common Carrier Bureau Attorney, Dr. Stagg Newman of the Office of Plans and Policy and Mr. Matt Vitale of the Accounting Policy Division in conjunction with the above-referenced docket. The discussion focused on issues relating to Wide Area Networks utilized by Schools and Libraries and their treatment under the Commission's Universal Service Orders. The attached written materials were the focus of the discussion and were distributed during the meeting.

We are submitting the original and one copy of this Memorandum to the Secretary in accordance with Section 1.1206(b)(2) of the Commission's rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me at (202) 326-8889 should you have any questions.

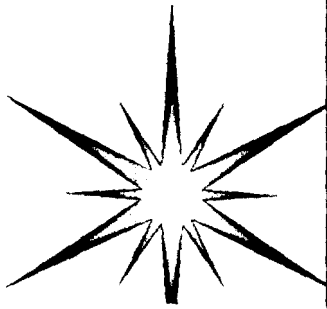
Sincerely,

A handwritten signature in cursive script, appearing to read "Jay Bennett", written in dark ink.

cc: I. Flannery, S. Newman, M. Vitale (w/o attachments)

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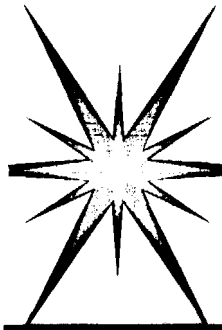


Wide Area Network Issues



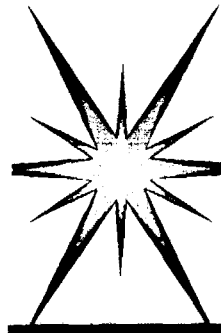
Section I.) Paragraph 193, Fourth Order on Reconsideration

- The FCC should clarify that paragraph 193 requires that wide area networks -- AS TELECOMMUNICATIONS SERVICES -- are eligible for discounts where leased, but not when they are built and purchased
 - regardless of whether WANs carry Internet or IP traffic
 - The SLC has a different interpretation of this paragraph, which is inconsistent with the FCC's April 10, 1998 Report to Congress on C.C. Docket No. 96-45



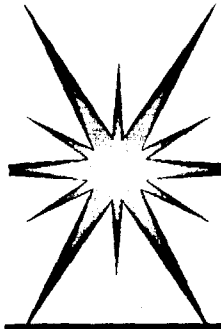
Portion of paragraph 193 at issue

- *“....wide area networks built and purchased by schools and libraries do not appear to fall within the narrow provision that allows for support for access to the Internet because wide area networks provide broad-based telecommunications.”*
- Our interpretation: WANs are ineligible for support as [the category] Internet access.



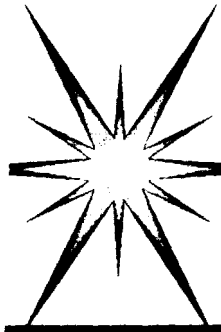
Paragraph 193 logic (Our view)

- This paragraph categorically describes potential criteria by which WAN connections **MIGHT** be eligible for support when **PURCHASED** by a customer
- FCC reaches the conclusion that USF support will not be allowed for WANs when **BUILT** and **PURCHASED** by examining each of three categories:
 - telcom service: WANs which are built and purchased by schools/libraries do not meet statutory definition of telecommunications -- must be a telcom service provided by a common carrier
 - internal connections: WAN connections are not internal connections; excluded not because they are built and purchased, but rather because WANs are not internal connections
 - Internet access: WANs which are built and purchased by schools/libraries do not fall within the narrow provision for Internet access because WANs provide broad-based telecommunications.



Logic consistent with USO

- The Universal Service Order, footnote 585: specifies USF support is available for WANs when provided through an arrangement which constitutes a telecommunications service, i.e., via leased telephone lines.
 - *“This does not preclude schools and libraries from receiving universal service discounts on a wide area network run over leased telephone lines because such an arrangement constitutes a telecommunications service.”*



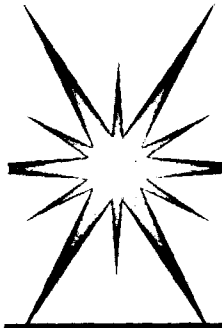
Paragraph 193 logic (SLC view)

- WAN connections are ineligible for support as Internet access **ONLY** if they are “**BUILT and PURCHASED.**”
 - i.e., the act of building and purchasing excludes WANs from support as Internet access
- Effect of SLC interpretation: WAN connections leased from any provider as the category Internet access are eligible for discount
 - if the WAN service provider is not a telecommunications carrier, an allocated portion of the WAN which carries Internet traffic is eligible for discounts as Internet access
 - The SLC interpretation has implications for current proceedings, issues: state networks, private networks, Tennessee



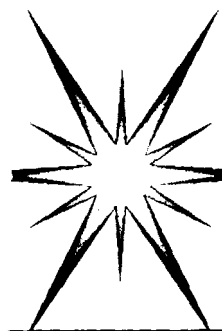
SLC Interpretation conflicts with the FCC's April 10, 1998 Report to Congress

- paragraph. 68: *"Internet access, like all information services, is provided 'via telecommunications.'"*
- paragraph 69: discusses cases where ISP owns transmission facilities and states: *"ISP is providing telecommunications as a non-common carrier..."*
- footnote 138: *"..."telecommunications' and 'information service' are mutually exclusive categories."*
- footnote 138: *"The information service provider, indeed, is itself a user of telecommunications; that is, telecommunications is an input in the provision of an information service. Our analysis here rests on the reasoning that under this framework, in every case, some entity must provide telecommunications to the information service provider. When the information service provider owns the underlying facilities, it appears that it should itself be treated as providing the underlying telecommunications."*



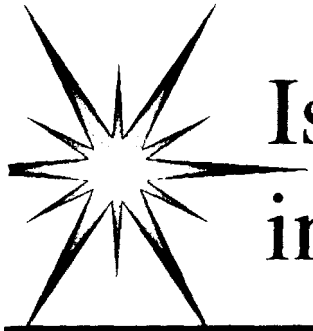
The effect of that report

- By the FCC's own reasoning, if the transmission facilities for an information service are "telecommunications", then according to the Act, those facilities must be provided by a telecommunications provider to be eligible for discount. They cannot become eligible for discount by calling such facilities "Internet access."



Our Conclusions (Section I.)

- Whether built/purchased or leased, WANs provide (or have the capability to provide) broad-based telecommunications; i.e., they can carry Internet and other-than-Internet traffic.
- WANs are telecommunications services and regardless of the type of traffic being carried (e.g., Internet) over the WAN connections, the connections must be provided by a telecommunications carrier to be eligible for support.
- WANs are ineligible for support under the Internet access category because they provide (or have the capability to provide) more than Internet access.
- Paragraph 193 of the 4th Order, footnote 585 of the USO and the FCC's April 10 Report to Congress substantiate our position.
- Paragraph 193 of the Fourth Order was written to describe FCC's conclusion regarding ineligibility of WANs when they are purchased. The FCC chose to explain their decision by examining each of three categories.



Issues Created by the SLC's interpretations

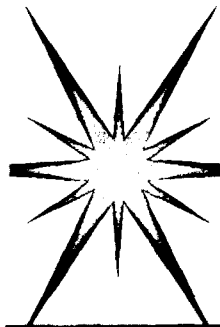
- This matter has relevance to the appeal of *ISIS vs. State of Tennessee* where definitions of Internet access, internal connections, and telecommunications services may have been interchanged or confused.
- Some schools, libraries may have confused telecommunications services and Internet access from an ISP; others may have selected a non-telecommunications provider for their WAN connections or for their connection to an ISP and categorized as Internet access.
- Commercial private network providers can resell spare capacity on their private networks to schools and receive funding from the USF (which can then be used to further develop their private networks). Private network providers receiving funds directly from the USF defies the Act and the Commission's orders.



Section II.) Paragraph 444 of the Universal Service Order

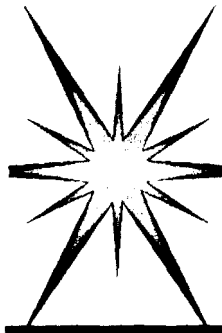
Concerning eligibility of connections between a customer and an ISP:

- The FCC should clarify that paragraph 444 of the May 1997 USO requires that the connection between the customer and the ISP be provided by a common carrier to be eligible for USF funding:
 - *“We conclude that eligible schools and libraries will be permitted to apply their relevant discounts to information services provided by entities that consist of:*
 - (i) the transmission of information as a common carrier*
 - (ii)”*
- WANs provided by common carriers are eligible for funding only as the “transmission of information as a common carrier.” The issue here is WHO may provide the WAN services subject to discount.



Our Interpretation

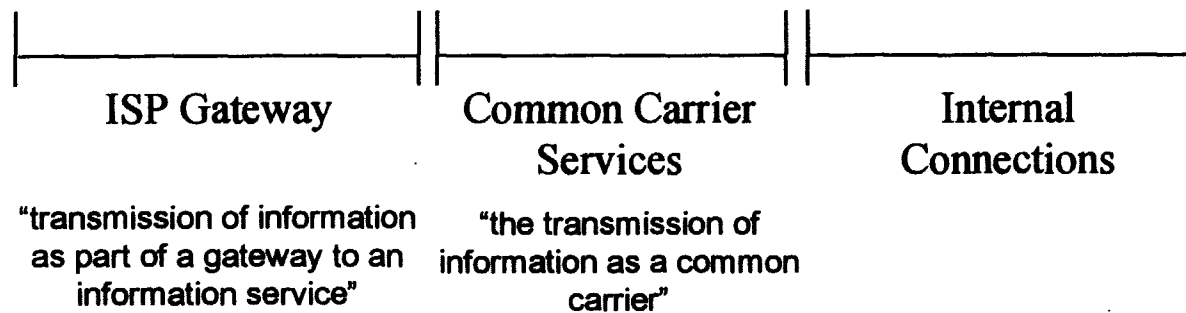
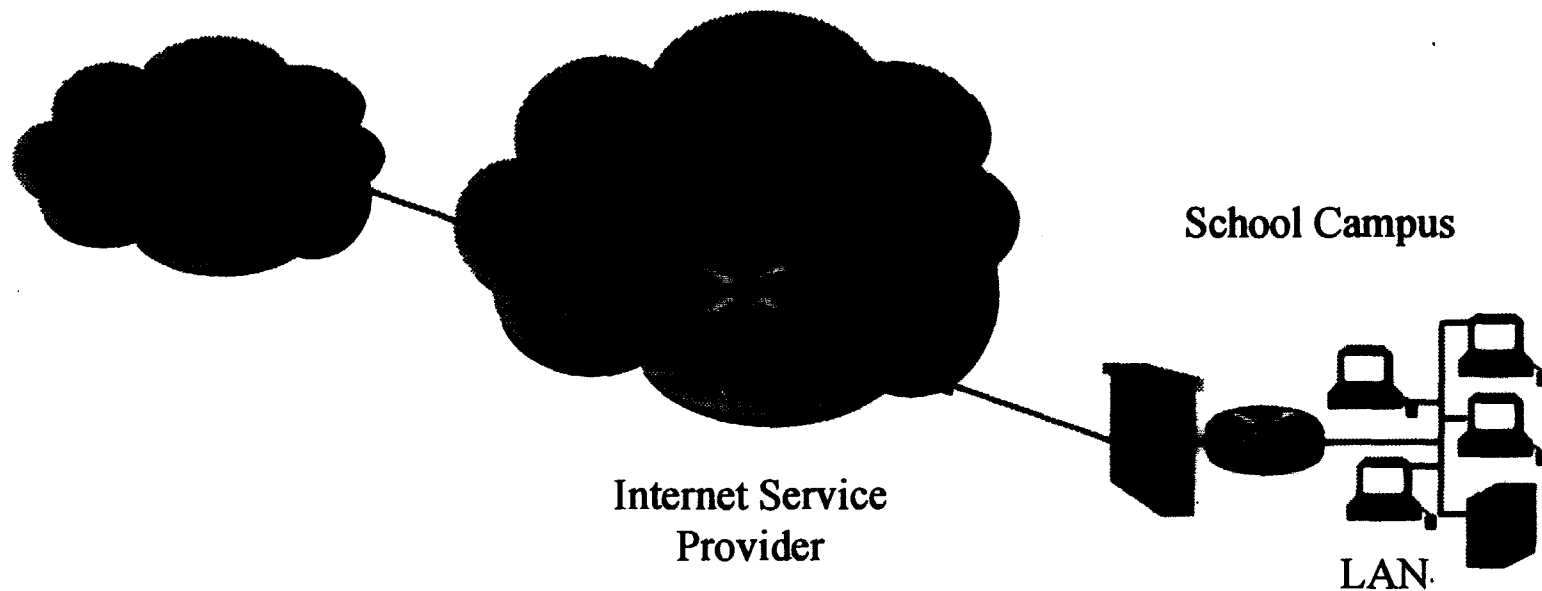
- Any telecommunications connection on the customer's side of the Internet service provider (up to the point of internal connections) is a telecommunications service, and, to be eligible for universal service funding must be provided by a common carrier.
- This position is supported by the FCC's April 10 FCC Report to Congress on C.C. Docket 96-45
 - By the FCC's own reasoning, if the transmission facilities for an information service are "telecommunications", then according to the plan, those facilities must be provided by a telecommunications provider to be eligible for discount. They cannot become eligible for discount by calling such facilities "Internet access."



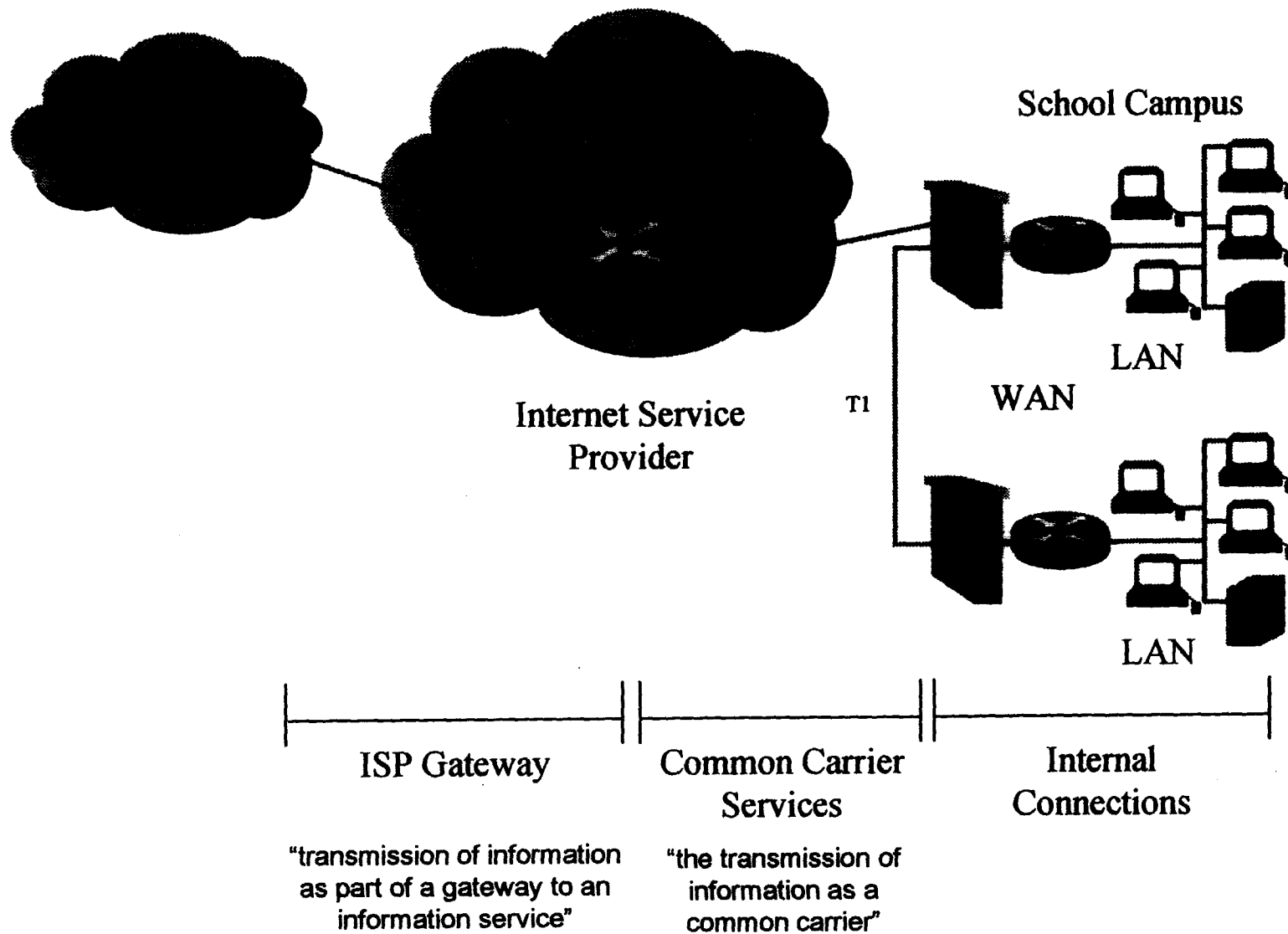
What is Internet Access?

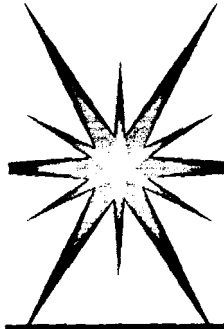
- Internet services are defined in paragraph 444 as:
 - (i) *“the transmission of information as a common carrier”* (i.e., the connections from the customer to the ISP)
 - (ii) *“the transmission of information as part of a gateway to an information service”* (i.e., connections from the ISP’s “gateway” routers and servers to the global Internet).
 - (iii) *“electronic mail services”*

Wide Area Networks



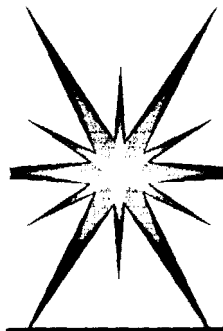
Wide Area Networks





Our concerns

- Same concerns for some schools, libraries arise from lack of understanding
 - interchanged telecommunications services and Internet access
 - contracted for telecommunications services from a non-telecommunications provider as the category Internet access
- When taken together with the SLC misinterpretation or separately, the different interpretations undermine program integrity and should be clarified before the SLC issues authorizations for discounts expected in September.



Section III.) Router Issues

- Consistent with paragraph 193 and footnote 583 of the 4th Order on Reconsideration, the FCC should clarify that a router used as part of the hubbing arrangement for a WAN is CPE and can be purchased as internal connections.



Footnote 583 and paragraph 193 of 4th Order on Reconsideration

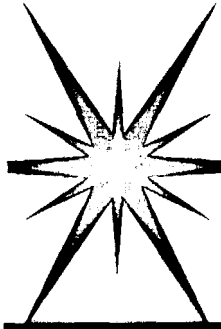
- *“...connections between multiple instructional buildings on a single campus would constitute internal connections. Connections between multiple separate schools, however, would not constitute internal connections and would instead be considered part of a wide area network.”*
- *“...wide area networks are not internal connections within a school or library. We herein establish a rebuttable presumption that a connection does not constitutes internal connection if it crosses a right-of-way.”*



SLC interpretation of Paragraph 193 and footnote 583

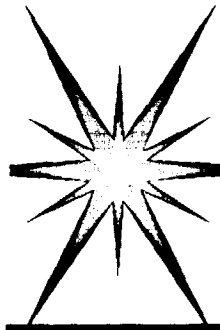
- *“Since wide area networks do not constitute internal connections, the cost of purchasing components/service used for WANs will not be eligible for discounts. If purchased components of eligible internal connections are also used to serve a wide area network, then the price of the components that may be purchased by an eligible entity to provide the internal connections may be allocated between internal connections and wide area network.”*

-SLC Fact Sheet on WANs



Effects of SLC interpretation

- Routers associated with hubbing arrangements for WANs must be leased as part of the WAN service from a telecommunications provider to be eligible for universal service funding.
- Since routers are CPE and predominantly purchased rather than leased, the market must be driven to offer routers for lease to make them eligible for funding.
 - This impedes competition for routers since many CPE companies may not be able to provide monthly billing for leases.
- The SLC's decision that purchased PBXs that operate as a hub for school district communications are eligible for universal service funding while routers purchased as part of a hubbing arrangement are not eligible creates an anomaly in the application of the rules.
- The decision imposes an allocation requirement that would be arbitrary and capricious and administratively impractical to implement and audit.



Our Conclusions (Section III.)

- Routers are CPE and are typically purchased and maintained by customers on their premises. As with PBXs, they should always be considered internal connections including where used in a hubbing arrangement as part of a wide area network.

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
)	CC Docket No. 96-45
Federal-State Joint Board on)	(Report to Congress)
Universal Service)	

REPORT TO CONGRESS

Adopted: April 10, 1998

Released: April 10, 1998

By the Commission: (Chairman Kennard and Commissioners Ness, Powell and Tristani
issuing statements; Commissioner Furchtgott-Roth dissenting and issuing a statement)

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networks, that offer better performance or security to a limited set of users, but can still communicate with the Internet using IP.

64. The Internet is a distributed packet-switched network, which means that information is split up into small chunks or "packets" that are individually routed through the most efficient path to their destination. Even two packets from the same message may travel over different physical paths through the network. Packet switching also enables users to invoke multiple Internet services simultaneously, and to access information with no knowledge of the physical location of the server where that information resides.

65. Internet usage has grown steadily and rapidly, especially since the development of the World Wide Web in 1989. According to one survey, there are currently more than 4,000 Internet service providers and 40 national Internet backbones operating in the United States.¹²⁶ According to data presented at our *en banc* hearing on February 19, 1998, Internet service provider market revenues are projected to grow from under four billion dollars in 1996 to eighteen billion dollars in the year 2000.¹²⁷

D. Discussion

1. Provision of Transmission Capacity to Internet Access and Backbone Providers

66. Internet service providers typically utilize a wide range of telecommunications inputs. Commenters have focused much attention on the fact that Internet service providers purchase analog and digital lines from local exchange carriers to connect to their dial-in subscribers, and pay rates incorporating those carriers' universal service obligations.¹²⁸ What has received less attention is that Internet service providers utilize other, extensive telecommunications inputs. While a large Internet service provider engages in extensive data transport, it may own no transmission facilities. To provide transport within its own network, it leases lines (T1s, T3s and OC-3s)¹²⁹ from telecommunications carriers.¹³⁰ To ensure transport beyond the edges of its network, it makes arrangements to interconnect with one or

¹²⁶ Boardwatch Magazine, *Winter 1998 Directory of Internet Service Providers* at 4, 25.

¹²⁷ February 19, 1998 *en banc* transcript at 15 (testimony of Mr. Hyland).

¹²⁸ See, e.g., USIPA comments at 4.

¹²⁹ A T1 is a digital transmission link with a capacity of 1.544 million bits per second. A T3 has a capacity of 44.736 million bits per second. An OC-3 is a fiberoptic link with capacity of 155.52 million bits per second.

¹³⁰ America Online reports that it expects to spend roughly \$1.2 billion for telecommunications services in fiscal 1999. The prices it pays for those services incorporate universal service contributions. See AOL comments at 17 & n.65; AOL reply comments at Attachment 7-8 (Jeffrey K. Mackie-Mason, "Layering for Equity and Efficiency: A Principled Approach to Universal Service Policy"); see also, e.g., Coalition comments at 13-15; ITI and ITAA comments at 8; Worldcom comments at 8-9 & n.15.

more Internet backbone providers.¹³¹ We explain below, in Part IV.D.2. that Internet service providers themselves provide information services, not telecommunications (and hence do not contribute to universal service mechanisms). But to the extent that any of their underlying inputs constitutes interstate telecommunications, we have authority under the 1996 Act to require that the providers of those inputs contribute to federal universal service mechanisms.

67. With regard to the lines leased by Internet service providers to provide their own internal networks, the analysis is straightforward. We explain below that the Internet service providers leasing the lines do not provide telecommunications to their subscribers, and thus do not directly contribute to universal service mechanisms. The provision of leased lines to Internet service providers, however, constitutes the provision of interstate telecommunications.¹³² Telecommunications carriers offering leased lines to Internet service providers must include the revenues derived from those lines in their universal service contribution base.¹³³ The record reveals that at least some leased-line providers are complying with that requirement, and the prices paid by Internet service providers for their leased lines reflect that universal service obligation.¹³⁴

68. Internet access, like all information services, is provided "via telecommunications." To the extent that the telecommunications inputs underlying Internet services are subject to the universal service contribution mechanism, that provides an answer to the concern, expressed by some commenters, that "[a]s more and more traffic is 'switched' to the Internet . . . there will no longer be enough money to support the infrastructure needed to make universal access to voice or Internet communications possible."¹³⁵ To the extent that IP-based services grow, Internet service providers will have greater needs for transport to accommodate that level of usage. Those needs will lead to increased universal service contributions by providers of the leased lines that make up internal Internet service provider

¹³¹ One study indicates that transport costs, including incoming phone lines, leased lines and interconnection at a network access point, currently amount to roughly 25% of an Internet service provider's total costs. Lee W. McKnight & Brett A. Leida, "Internet Telephony: Costs, Pricing and Policy" (1997), at 14.

¹³² See *Universal Service Order*, 12 FCC Rcd at 9175, para. 780; 47 U.S.C. § 54.703.

¹³³ We base universal service contributions on "end-user telecommunications revenues." 47 C.F.R. § 54.703; *Universal Service Order*, 12 FCC Rcd at 9205-9212, paras. 842-57. Telecommunications revenues are treated as end-user revenues and are included in the funding base, unless the associated telecommunications offerings are provided to an entity that incorporates them into services that should generate their own universal service contributions. See *Instructions for Completing the Worksheet for Filing Contributions to the Universal Service Support Mechanism*, FCC Form 457, at 12. Because an Internet service provider is not such an entity, entities providing interstate telecommunications to Internet service providers must include the associated revenues in their universal service funding base.

¹³⁴ See, e.g., Worldcom comments at 8 n. 15 ("when UUNET purchases network capacity, a basic telecommunications service, from Worldcom Technologies, Inc., Worldcom reports those revenues to the USAC as revenues earned from an end user").

¹³⁵ Senators Stevens and Burns comments at 9; see also, e.g., Airtouch comments at 30-31.